

Since this paper was written, Dr. Balfour has kindly placed in my hands all his specimens of these plants, and I learn from them that he gathered *H. anglicum* on the banks of the Crinan Canal in Argyleshire (1827), near Culross on the Frith of Forth (1833), and near Galway (1838). It will probably soon be noticed in many other places. It is hoped that these remarks will cause botanists to examine carefully all specimens named *H. androsæmum*, in order that we may soon be informed of the true claims of *H. anglicum* to be separated from it; and may also learn what is the geographical range of each of the plants.

### X.—On the Ornithology of Malacca.

By ALFRED R. WALLACE, Esq.

ALTHOUGH Malacca birds are among the very commonest in European collections, I am not aware that the country has been visited by any ornithologist; a few remarks upon the birds I met with may not therefore be unacceptable to your readers. I spent nine weeks there, but for a fortnight I was ill in the town, and seven only were occupied in collecting. Nevertheless I made extensive collections of insects, and procured 135 species of Passerine birds. In the 'Annals' for May 1854 is a list of birds collected during a two years' residence at Barrackpore, which comprises only 127 land birds (including *Gallinaceæ* which I have not reckoned); and in a note of the numbers of Ceylon birds, kindly furnished me by Mr. Edgar L. Layard, I find 165 *Passeres* were the whole number known to him after several years' researches in that fertile island. Now, as I certainly have not obtained one-half of the birds to be procured in Malacca, we must conclude the locality to be an exceedingly productive one for the ornithologist.

Among the commonest and most characteristic birds are *Cymbirhynchus macrorynchus*, Gm., *Oriolus xanthonotus*, Horsf., *Nyctiornis amicta*, Sw. (one of the loveliest of Eastern birds), the beautiful azure and black *Irena puella*, Horsf., *Megalaima versicolor* (the commonest of the Barbets), *Calypomena viridis* of Raffles (abundant); and beautiful Kingfishers are not uncommon. The first bird I have mentioned was that which I first shot, and I was both surprised and delighted at its extreme beauty, especially the bright colours of the enormous beak, which all fade in the dry specimens and are replaced by a dull black. The upper mandible is clear sky-blue; the lower bright orange-yellow, margined with blue, and the eyes emerald-green, or blue and black powdered; these colours all contrasting beautifully with the deep black, pure white, and rich claret colour of the

plumage. In the smaller species, *Eurylaimus ochromalus*, Raffl., the bill is blue and pea-green.

Besides the *Megalaima versicolor*, three other Barbets are not uncommon, *M. mystacophanos*, Temm., *M. chrysopogon*, Temm., and *M. trimaculatus*, Gr. Notwithstanding their long rictal bristles, these seem to be all fruit-eating birds; as in the stomachs of dozens which I have examined, nothing else was found. They are dull, slow-moving birds, and in their actions much resemble the Toucans and Hornbills. I doubt if they have any affinity to the Woodpeckers, next to which they are generally placed. In the weakness of the feet, the size and shape of the skull and neck, and in the texture of the skin and plumage, and even in their colours, they approach much more nearly to the smaller Toucans.

In the *Picidæ* I was very fortunate, obtaining nearly a complete series of the Malacca species, as the following list will show :—

1. *Meiglyptes tristis*, Horsf. Singapore and Malacca.
2. *M. brunneus*, Eyton. Common.
3. *Phaiopicus rufinotus*, Mulh. Common.
4. *Tiga tridactyla*, Gr. Scarce.
5. *T. Rafflesi*, Vig. Scarce.
6. *Gecinus puniceus*, Horsf. Common.
7. *G. mentalis*, Temm. Common.
8. *Hemilophus Mackloti*, Wagl. Not uncommon.
9. *H. Mulleri*, Bon. ? distinct.
10. *H. javensis*, Horsf. Scarce.
11. *H. validus*, Reinw. Singapore.
12. *Hemicercus concretus*, Reinw. Mt. Ophir.
13. *H.*, n. s. ? Like *H. concretus*, but head and crest the same colour as the body.
14. *Sasia abnormis*, Temm. Not uncommon.

The Kingfishers of this part of the world are pre-eminent for beauty; the finest which I obtained were the *Halcyon concreta*, Temm., *H. pulchella*, Horsf., *H. gularis*, Kuhl, the lovely little *Alcedo biru*, Horsf., and a *Ceyx* which I cannot determine, the specimen being young. The birds, however, which I found most abundant and varied were the Thrushes, of the subfamily *Ixodinæ*, and the various strong-legged birds forming the genera *Timalia*, *Macronus*, &c. These latter birds are found to be abundant both in species and individuals when carefully searched for on the sides of roads and other places where there is a thick low jungle, while the former are found on every fruit-tree and about the Malay villages. Their affinities are most intricate and puzzling.

I have eight species of birds, all of an obscure dusky olive

plumage and of nearly the same size, which can only be distinguished by minute differences in the bill, in the colour of the eyes, or obscure markings in various parts of the plumage. They appear to belong to the genus *Trichostoma*, Blyth (*Malacopteron*, Gray). They are mostly fruit-eating birds, though they also feed freely on insects. Allied to them is the beautiful *Ixidid cyaniventris*, Blyth, which is not uncommon; also the *Trichophorus gularis*, Temm., the *Pycnonotus ochrocephalus*, Gm., which has a powerful and melodious voice, and may be considered the singing thrush of Malacca; it is often seen in cages.

The *Copsychus Mindanensis*, Gm., has also a very beautiful and varied note; it is the commonest bird in Singapore and Malacca; it feeds much on the ground, and its rich black and white plumage makes it a pleasing object. It is called the Magpie by the European inhabitants here, from its colours and long tail, which latter it throws up vertically when alarmed, at the same time uttering a loud creaking note. Then we have the pretty *Brachypus melanocephalus*, Gm., *B. vidua*, Temm., and *Ixos analis*, Horsf., all common and pretty birds. Of *Ixodina* and *Timaliina* I have procured forty species, some of which I have little doubt will prove undescribed.

The *Pittidæ* and *Cinclidæ* are among the rarest and most beautiful of the Malacca birds; of each I obtained but one species, the lovely *Brachyurus granatina*, Temm., and the elegant *Enicurus frontalis*, Blyth. The *Pittæ* inhabit the dense jungles, where their powerful legs enable them to leap and run so quickly that it is very difficult to shoot them. Flycatchers are rather plentiful in the more open jungles. The *Muscipeta paradisi*, L., is not uncommon, but I could not obtain specimens in full plumage. The beautiful little *Myiagra Mindanensis*, Quoy and Gaim., is also common.

The curious little *Prionichilus percussus*, Strickl., is very abundant along the road-sides, the red spot on its breast making it a conspicuous object. Many species of *Edoliidæ* are abundant; besides the lovely *Irena puella*, Horsf., there is the *Edolius remifer*, Temm., and some allied species; and the brilliantly-coloured *Pericrocotus miniatus*, Temm., and *P. flammeus*, Blyth, are more rarely found. Two fine species of *Garrulidæ* are occasionally met with, the *Crypsirhina leucoptera*, Temm., and a species of *Lophocitta*. Three pretty, green birds, of the genus *Phyllosornis*, are very common, frequenting the vicinity of houses, feeding on both fruit and insects from low trees and shrubs; they appear to be *P. Cochinchinensis*, Gm., *P. Sonnerati*, Jard., and *P. icterocephala*, Temm.

Of the beautiful little Sun-birds, many species are to be



found, but I was not fortunate in procuring them, my list comprising only *Dicaeum cruentatum*, L., *Anthreptes lepida*, Lath., *A. hypogrammica*, Müll., and four species of the interesting genus *Arachnothera*, which are both honey-suckers and spider-eaters. The common Starling of Malacca is the *Lamprotornis Cantor*, Gm.; the *Gracula Javanensis*, Osbeck, is also very abundant. Of Finches I obtained two species, of the genus *Munia*, Hodg., and the house sparrow of Malacca and Singapore, which is found only in the towns; it is like, and perhaps the same as, the European species, *Fringilla montana* of Linnæus.

My stay was too short to obtain many of the larger birds. The Hornbills are very numerous in species, but I only procured three, *Buceros rhinoceros*, L., *B. intermedius*, Blyth (at Singapore), and *B. malayanus*, Raffl. (*anthracinus*, Temm.). This last species has the bill white in the male and black in the female, which latter is the *B. nigrirostris* of Blyth. I satisfied myself of this fact from the dissection of about a dozen specimens shot off the same tree. Of Raptores I only obtained five, two Hawks and three Owls. The little *Hierax caerulescens*, L., is the only one I can certainly determine; it often perches on dead trees and stumps. I have found *fruit* and insects in its stomach. In the Rasorial order I was still more unfortunate, not obtaining a single species. I have seen a small Quail, but so wild and in such bushy places that I could never get a shot at it. The Jungle Cocks were often heard crowing near us, and during my visit to Mount Ophir the loud voice of the magnificent Argus Pheasant was heard every evening, and other species occasionally; but these birds are seldom shot, the Malays securing them with snares. I had an old Javanese with me, who had been with Dr. Blume in Java, and since with M. Diard, and had for twenty years been shooting and skinning birds, and even he had never shot an Argus Pheasant, nor indeed seen one till it had been caught in the snare. I will conclude this very imperfect notice by mentioning two birds which are perhaps the rarest I procured, *Acanthylis giganteus*, Temm., and *Macropteryx comatus*, Temm. The first is not uncommon in Singapore; the second is very rare, frequenting the forest only, and probably migrates from Sumatra, whence many peculiar birds appear to visit Malacca at certain seasons.

There are two Portuguese resident in Malacca, whose sole business is procuring and selling the skins of birds and animals. They have numbers of the Malays of the interior in their employ, whom they furnish with ammunition, arsenical soap, &c. All the birds are skinned and put up by these Malays, who are paid a small sum per skin. The greater part of the birds thus come from one or two localities only, where, as this collecting has

been going on for years, there can hardly be a new bird to be found. The Malays skin birds remarkably well, some of them preparing even the delicate Trogons most perfectly. They stuff them however too tightly, and their arsenical soap is not well made, many of the specimens therefore lose their feathers.

XI.—*Descriptions of the Animals of certain Genera of Bivalve Shells.* By S. P. WOODWARD, Esq., F.G.S.

MY DEAR SIR,

January 5, 1855.

MR. S. P. WOODWARD has kindly drawn for me certain genera of Bivalve shells which I had placed in his hands to illustrate my arrangement of the Conchifera. I forward them to you for insertion in the 'Annals,' with the notes which he has made on them.

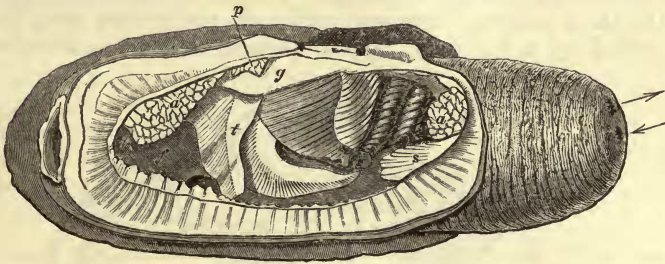
I am, my dear Sir, yours very truly,

JOHN EDWARD GRAY.

Dr. Francis.

*Glycimeris siliqua*, Chemn. Newfoundland?

*Mantle-lobes* united, covered like the siphons with wrinkled epidermis. *Siphons* combined, thick and muscular, not entirely



*a, a*, adductor muscles; *p*, pedal muscle; *s*, siphonal muscle; *f*, foot; *t*, palpi; *g*, gills.

retractile; orifices fringed. *Pedal* opening quite anterior, rather small, with a thickened border. *Foot* thick, conical, pointed. *Palpi* large, sickle-shaped, striated inside, with a broad plain posterior border. *Gills* two on each side, thick, plaited (much crumpled when the siphons are retracted), unequal, the outer shortest and rounded in front.

*Psammobia pallida*, Desh. Red Sea.

*Mantle* open, margins thick, undulated, double, outer minutely fringed. *Siphons* moderately long, thick, orifices plain; branchial